

The Effect of Scaffolding Techniques on Students' Writing Achievement

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Abstract: This paper reports a study which investigated the effect of scaffolding techniques on students' writing achievement. This study is quasi-experimental research with nonrandomized control group design. The total number of participants was 36 students who were in two different groups: experimental group and control group. There were twenty students in the experimental group and sixteen students in the control group. The result of the pre-test showed that both the experimental group and the control group were equal and homogenous. since the statistical computation yielded significant value $p = 0.890$ which was higher than $\alpha = 0.05$. The analysis of writing test in post-test yielded $p = .027$ which was smaller than $\alpha = 0.05$. Thus, it can be concluded that scaffolding techniques can significantly improve the students' writing achievement.

Key Words: scaffolding techniques, writing achievement

Abstrak: Penelitian ini bertujuan untuk menginvestigasi teknik *scaffolding* terhadap kemampuan menulis siswa. Penelitian ini menggunakan eksperimental semu dengan desain *nonrandomized control group*. Jumlah partisipan dalam penelitian ini adalah 36 siswa yang dibagi dalam dua kelompok yaitu grup eksperimental dan grup kontrol. Grup eksperimental berjumlah 20 siswa, sedangkan grup kontrol berjumlah 16 siswa. Hasil pretest menunjukkan bahwa kedua grup sama dan homogen yang ditunjukkan oleh perhitungan statistik $p = 0.890$ yang lebih besar dari $\alpha = 0.05$. Sedangkan posttest menghasilkan $p = .027$ yang lebih kecil dari $\alpha = 0.05$. Oleh karena itu dapat disimpulkan bahwa teknik *scaffolding* secara signifikan meningkatkan kemampuan menulis siswa.

Kata kunci: teknik *scaffolding*, kemampuan menulis

Writing is one of the indicators of academic success since it is an active and productive skill. As noted by Celce-Murcia (1991), writing in second or foreign language with good accuracy and coherence is a great achievement. Graham and Perin (2007) divide writing as two complementary roles. First, it is a skill that needs the use of strategies (such as planning, evaluating, and revising text) to accomplish a variety of goals, such as writing report or expressing an opinion with the support of evidence. Second, writing is a means of extending and deepening students' knowledge; it acts as a tool for learning a subject matter.

Writing skill should also be practiced and mastered by experiences starting from paragraph writing into essay writing such as expository and argumentative writing. In other words, it takes some processes to make the students' writing skill develops. The students

should bring their knowledge into practices. According to Hadley in Singh and Rajalingam (2012), writing is a continuum of activity starting from mechanical aspects to more complicated actions of composition writing as the final stage. Writing also has important role in evaluation of student performance at school, being particularly when they have to express the knowledge they have required as they do in tests or exams (Carvalho, 2005).

In spite of the important roles of writing, many students face many difficulties to correctly translate their ideas into a readable text. The difficulties lie on how the students generate and construct the ideas using appropriate vocabulary, sentence and paragraph organization (Richard and Renandya, 2002). Laksmi (2006) and Manphonsri, et. al (2013) say that the learners suffer difficulties due to lack of

background knowledge for writing, i.e. grammar. The students experienced problems in getting ideas, organizing the ideas, developing the ideas into paragraphs, and maintaining paragraph unity. The challenges also arise when the students do not have enough knowledge about mechanics, style, content, as well as writing strategy. Furthermore, the rhetorical convention of English texts differs from the conventions in the students' first language. To put it another way, writing is a complex activity that should be mastered since students need to express the ideas in written form.

As a consequence, the need to implement innovative teaching techniques which help the students to improve their writing achievement is crucial. The researcher, hence, proposes to utilize scaffolding techniques as the teaching technique to solve the problem. Scaffolding techniques can also be implemented through the process writing approach. Vernon (2002) suggests that scaffolding should be given to the students from prewriting until the final draft. It is essential to implement scaffolding techniques since scaffolding in teaching writing is one process that allows the teachers to organize writing activities systematically to meet the needs of the students.

Scaffolding is the term originated from Vygotsky's concept of the Zone of Proximal Development (ZPD). Vygotsky defines ZPD as the distance between the actual development level of the learner, as determined by independent problem solving, and the level of potential development, as determined through problem solving under teacher guidance and/or interaction and collaboration with more capable peers (Vygotsky, in Walqui, 2006). A learning model based on this concept suggests two things about language learning (in MGMP module Ministry of National Education, 2009); (a) if a teacher is only concerned with what students can already do with language, then the students will never progress and (b) if the teacher supports the students so that they move through the zone of proximal development to their potential level of performance, real learning, and progress is possible.

According to Stuyf (2002), the scaffolding techniques provided are activities and tasks that (1) motivate or enlist the student's interest related to the task, (2) simplify the task to make it more manageable and achievable for a student, (3) provide some direction in order to help the students focus on achieving the goal, (4) reduce frustration, (5) model and clearly define the expectations of the activity to be performed. There-

fore, scaffolding techniques can be assumed to decrease the writing apprehension level of student since students engage in supportive environment, be motivated in learning, and experience less frustration situation in completing the writing task.

Moreover, when students learn through scaffolding techniques they experience the process of writing, and get guidance when they need it. It is better to see writing as the process the students go through. Laksmi (2006) says that the process of writing drafts until publication that counts. She also reports that it increases the students' confidence in writing and helps them to commit to their work. They are also not worried about the judgment of the work they do. They feel teacher's support and increase motivation. Consequently, scaffolding techniques is believed to develop students' writing skill.

Based on the background of the study described above, the researcher is interested in conducting the study to investigate the effect of scaffolding techniques on students' writing ability.

METHOD

This is experimental research designed to discover the effect of scaffolding techniques on students' writing achievement. Experimental research used in this study was Quasi-Experimental Research since the researcher had no access to the arrangement of the subjects. This design was also considered for its practicality. Moreover, the design chosen was a Non-Randomized Control Group Pretest-Posttest design. Therefore, the researcher selected two classes to be involved in this study. One class was assigned as an experimental group and the other one was assigned as a control group.

Moreover, the pretest was used as a means to find out the homogeneity of the two groups before the treatment and posttest was used as a means to find out the effectiveness of the teaching technique. The design of the study can be illustrated in Table 1.

The subjects of this study are the first year students at English Education Department in Abulyatama University in academic year 2014/2015. There are 36 students who were divided into two classes. There are 20 students for the experimental one and 16 students for the control group. The treatment was applied in the experimental group and conventional method was applied in the control group.

At the beginning of the research, the subjects in the experimental group and the control group were

Table 1. Nonrandomized Control Group, Pre- and Posttest Design

Group	Pretest	Independent Variable	Dependent Variable
			Posttest
E	Y1	X	Y2
C	Y1	-	Y2

Descriptions:

E = the experimental group

C = the control group

Y1 = the pretest (as a test of homogeneity)

Y2 = the posttest (to decide the effectiveness of the teaching technique)

X = Scaffolding techniques

administered the pretest. Next, the experimental group was exposed to scaffolding techniques, while the control group was taught conventional teaching method. At the end of the experimentation, the experimental group and the control group were administered the posttest to decide the effectiveness of the treatment. The research was scheduled for eight meetings. The teaching schedules for the experimental group and the control group worked in the same weeks. The meetings took twice a week for both groups following the schedule from the university.

The instruments utilized in this study were writing test (pretest and posttest) and the scoring rubric to assess the students' works. Writing test was used to obtain the students' essays and the scoring rubric was used as a guide to raters to grade the essays. Table 2 shows the function for each instrument.

Writing Test

There were two writing tests used in this research namely pretest and posttest. Pretest is used to check the similarity level of two group and posttest is used to test the students' writing achievement after the treatment. In other words, it is to test the achievement of study objective within a certain period of time.

The students were requested to write an expository essay by using comparison and contrast development method by choosing one of the topics given before treatment (pretest) and after treatment (posttest). The time allotment for the test was 90 minutes. The students needed to write an essay about 400-450 words consisting of three parts namely introduction, supporting, and concluding paragraphs. The test was limited in terms of the number of words in order to made the students' essay had the same length and easy in grading. In constructing the direction, the researcher also provide the information about how the essay was scored.

Table 2. Research Instruments and Their Functions

No	Instruments	Functions	
1.	Writing test	Pretest	As a test of homogeneity
		Posttest	To decide the effectiveness of the study
2.	Scoring rubric	As a guide to rate the students' essays	

In the pretest, the students should choose one topic from two topics provided; two your favorite movies, and two your favorite singers or bands. The posttest also had two topics which were university and senior high school, and two cities which you have ever visited. Furthermore, the purpose of giving two topics for pretest and posttest was to give the students opportunity to choose a topic that was more suitable with their own interest.

Scoring Rubric of Writing

In this study, the results of the writing were analyzed using an analytic scoring rubric. The scoring rubric was adapted from Jacobs (1981). The changes were made to make it suitable for grading expository essay with comparison and contrast development method. The rubric was divided under five aspects which are content, organization, language use, vocabulary and mechanics. Content refers to the development of the topic and the completeness of supporting information. Organization is developed based on the generic structure of expository essay with comparison and contrast development method. Language use focuses on the correctness of grammar. Vocabulary refers to the effective choice of words and mechanics refers to the use of capitalization, punctuation, and spelling.

Rating Process

Since the test was a subjective test meaning that the rating process could only be done subjectively. The score was depended on the rater's impression towards the students' essay which was various in terms of content, organization, language use, vocabulary, and mechanics. As a consequence, to avoid subjectivity, the rating process was done by two raters. The raters were the English lecturers who taught writing.

Before the rating process, the two raters were explained how to use the scoring rubric. Then the two raters rated the representative works of the students in order to have the same perspective in scoring the students' writing. Hopefully, it could minimize the

different result of the students' scores between the first rater and the second raters in the rating process. Then the raters graded the students' works individually. The results of the raters then were divided by two in order to get final scores for each class.

Test Validation

In this study, construct-related evidence and content-related evidence were used. In order to prove that the result of the test fulfilled construct validity evidence, the test was in the form of direct writing. It is obvious that the most direct way of measuring students' ability in writing is to have them write.

Moreover, the content validity evidence, tries to prove the appropriateness of the test content. In relation to this study, the test was used to measure the students' writing ability in expressing ideas in the form of expository essay with comparison and contrast development method. Therefore, the instruments were validated by two English lecturers who have been teaching writing for years. The expert validation form was used to obtain feedback and comment. Moreover, the aspects covered in expert validation form were the appropriateness between the writing topics considering the students' level and interest, time allotment needed to write an essay, and the clarity of the task.

Reliability

Reliability is apparently necessary for an essay writing test which tends to be very subjective. The subjectivity score causes the inconsistency of the scores resulted from a test. The test will be established as unreliable when the scores given by two raters are significantly different.

The reliability of this study was shown by the same score awarded to the students' essay when it was rated by two or more raters (inter rater reliability) or the same rater on different occasion (intra rater reliability). By using inter or intra rater reliability, we could know the consistency of the students' scores. The researcher employed inter rater reliability. The researcher asked two English lecturers to grade the students' works.

Data Collection

The data was collected by conducting pretest and posttest. The pretest was given to test the homogeneity of the two groups and it also used as the basis of choosing the statistical parameter for analyzing

posttest. Meanwhile, the posttest was administered after the researcher implemented the scaffolding techniques.

Data Analysis

The data were analyzed by using SPSS 16.0 software. The data of pretest and posttest were analyzed using Independent Sample T-Test. The writing test (pretest) from the experimental group and control group was analyzed by testing the fulfillment of the assumption to see the normal distribution and homogeneity of the data. Meanwhile, the writing test (posttest) was analyzed to find out the effectiveness of the treatments.

RESULTS

Prior to the treatments, both groups were given a writing test as a pretest to ensure the comparability of the two groups in performing their writing ability. The pretest was conducted to ensure that the two groups were homogenous; while the posttest was conducted to find out the effectiveness of the treatment by comparing the experimental group and the control group.

Pretest

The purpose of employing the pretest is to test the homogeneity of two groups. The statistical analysis of Independent Sample T-Test revealed that the significance values were $t_{\text{counted}} = -.140 < t_{\text{table}} = -1.69092$, $p = .890$, where $\alpha < 0.05$. It indicated that there was no significant difference between the experimental group and the control group since t_{counted} was lower than t_{table} . Besides, the $F_{\text{value}} = 1.809$ and significance value $p = .188$ were higher than $\alpha = .05$. This indicated that the variances were homogenous. The complete results of testing the pretest using Independent Samples T-Test are summarized in Table 3.

Based on the statistical analysis below, the researcher was able to decide the statistical parameter used to analyze the posttest data. Since it showed the two groups were homogenous, Independent Sample T-Test was employed to analyze the posttest data.

Posttest

After conducting the treatment to the experimental groups, the researcher gave posttest to the

Table 3. Independent Sample t-test of Pretest (N=36)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
pretest	Equal variances assumed	1.809	.188	-.140	34	.890	-.50000	3.58244	-7.78040	6.78040
	Equal variances not assumed			-.135	27.177	.893	-.50000	3.69945	-8.08834	7.08834

P < .05

Table 4. Independent Sample T-Test of Posttest

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
posttest	Equal variances assumed	5.115	.130	2.318	34	.027	8.05625	3.47626	.99165	15.12085
	Equal variances not assumed			2.206	24.115	.037	8.05625	3.65269	.51938	15.59312

experimental group and the control group. The test was given at the same day and date for both groups. Conducting the posttest was aimed to obtain the final data to find out the effectiveness scaffolding techniques on students' writing achievement. Then the scores of posttest from both groups were analyzed using Independent Sample T-Test. The results of analysis indicated that the obtained significance value $t_{\text{counted}} = 2.318$ was higher than $t_{\text{table}} = 1.69092$ with $df = 34$, $p = .027 < \alpha = .05$. The complete analysis results are showed in Table 4.

The statistical numbers above proved that there was enough evidence to reject null hypothesis. The results indicate that scaffolding techniques significantly affect students' writing achievement. Therefore, the alternative hypothesis stating the students who are taught using scaffolding techniques have better score in writing achievement than the students who are taught without using scaffolding techniques is accepted.

DISCUSSION

Based on the result of analysis, the implementation of scaffolding techniques in the experimental

group could increase the students writing achievement compared to the control group. This finding is supported by the previous studies (Katilie, 2003, Ve-reappan, et.al. 2011, Yangrifqi, 2012, Solikhah, 2012).

According to research, the students do not show satisfactory result in terms of writing achievement because they have lack of experience, lack of knowledge, and lack of confidence (Richard and Renandya, 2002, Ismail, 2010, Kara, 2013, Manphonsri, et al., 2013). Therefore, a teacher should create environment where she or he can support and encourage the students during the process of teaching and learning. The teacher should also create the environment where the students can engage in the social interaction, build their confidence and necessary strategies or knowledge to construct their own writing.

According to Hasan (2001), creating a classroom environment that nurtures students rather than merely correcting their mistakes has great potential to help the students. Scaffolding techniques that break the writing process into smaller steps, feedback related to ideas and accomplishment, peer feedback leading to confidence building have offered valuable opportunities for learning writing. Consequently, this present research proves that the implementation of

scaffolding techniques in writing instruction is able to create the nurture environment.

Scaffolding techniques enable the teacher or lecturer to create positive environment by giving continuous helps until these supports are gradually reduced. Laksmi (2006) states that by providing the learners with scaffold, it means giving them supports which gradually decrease as they become stronger and independent. In addition, scaffolding techniques help the students to engage in social interaction where the students are able to involve in the activities in which they share their knowledge and ideas to their peers.

In this study, writing activities were divided into collaborative activities which provided many experiences and individual activities which were the shifting of helps and supports to become independent. Collaborative activities provide students with many experiences when the students work with their peers. Santoso (2010) views the opportunity to interact with other learners in sharing, constructing, and negotiating meaning leads to knowledge construction. In other words, through collaborative writing, the students are engaged in groups where the experience shared. Thus, the students are greatly influenced by the peers around them. In designing the collaborative writing, every pair consisted of one knowledgeable students and novice one. According to Schwieter (2010), scaffolding writing technique makes up the process where expert help novice learners to develop a higher level of writing skill.

To sum up, it can be inferred that scaffolding techniques was more effective to increase students' writing ability. The implementation of scaffolding techniques into writing instruction is success to decrease the students' writing apprehension level. Hence, the findings of this research filled in position in adding and supporting the existing theory about the effectiveness of implementing scaffolding techniques to increase writing achievement as well as reducing writing apprehension level.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the research findings, it can be concluded that the implementation of scaffolding techniques improve the students' achievement in writing. The students who are taught using scaffolding techniques produced higher score in writing achievement than the students who were taught without using scaffolding technique.

Suggestions

Suggestion is directed for English writing teachers or lecturers to consider implementing scaffolding techniques in the classroom. The teachers or lecturers can apply scaffolding techniques in learning and teaching process to improve the writing achievement of the students since it has already showed positive effect and tested in this study. The next suggestion is for the future researchers who are interested to investigate the similar topic. The future researchers can consider the different level of students such as in high or junior high school and different learning styles.

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